

REMARKS

Claims 1-14 are currently pending in this Application. Reconsideration of the pending claims in view of the foregoing amendments and following remarks is respectfully requested.

Claim Rejections under 35 U.S.C. § 112

Claim 1 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claim 1 is hereby amended based on the suggestions by the Examiner as set forth in the Office Action. However, no amendment was made to use of the term “phosgene.” The Office Action proposed to change “phosgene” to “a phosgene.” It is respectfully submitted that there is only one phosgene and use of the terminology “a phosgene” would render the claim unclear. As such, no amendment was made as “phosgene” is clear to one skilled in the art. Withdrawal of these rejections is respectfully requested.

Claim Rejection under Obviousness Double Patenting

Claims 1-14 stand rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claims in U.S. Patent Nos. 6,392,057 (“the ‘057 patent”), 6,465,658 (“the ‘658 patent”), 6,891,045 (“the ‘045 patent”), and 7,102,012 (“the ‘012 patent”). The Office states that these cited patents claim a process for preparing N, N'-carbonyldiazoles by reacting an azole, phosgene and polar solvent. Further the Office opines that the difference between the instantly claimed subject matter and the claims of the cited patents is reaction conditions such as temperature and concentration which would be obvious to a skilled artisan. It is respectfully submitted that the Office has not provided significant basis for a double patenting rejection as the differences between the instantly claimed subject matter and that claimed in the cited patents is significantly more than simple reaction parameters. Each patent shall be addressed below. The Applicants request that the option to file a terminal disclaimer be held in abeyance until the Office has remarked on the comments set forth below.

The '057 patent discloses a method for the production of N, N'-carbonyldiazoles where the process features the use of aromatic solvents such as benzene, toluene, xylenes, monochlorobenzene, dichlorobenzene, trichlorobenzenes, and mixtures of these solvents. Further, the solvents are dried via incipient distillation. *See the '057 patent, column 3, lines 4-14.* In contrast, instant claim 1 features a polar solvent selected from the group consisting of ethers, ketones, and chlorinated aliphatic solvents. These solvents are not taught or suggested in the '057 patent. Further, there is no motivation in the '057 patent to use solvents other than aromatic solvents. Moreover, instant claim 1 provides that the solvent have a maximum water content of 0.5% by weight. Although the '057 patent discloses a distillation step for drying the solvent, nowhere does the '057 patent disclose that the solvent have a maximum water content of 0.5%. As such, there are significant differences between the instantly claimed process and that disclosed in the '057 patent. By use of the aromatic solvent in the process of the '057 patent, it is reported that reactant concentrations of 28 to 33% were obtained. *See the '057 patent, column 2, lines 35-39.* However, the instantly claimed process featuring a polar solvent selected from the group consisting of ethers, ketones, and chlorinated aliphatic solvents provides reactant concentrations of more than 40% by weight. This shows a considerable improvement in space/time yields. Thus, reactant concentrations obtained by the process of instant claim 1 featuring a polar solvent selected from ether, ketones, and chlorinated aliphatic solvents having a maximum water content of 0.5% by weight would not be obvious to one of skill in the art in view of the disclosure set forth in the '057 patent. Therefore, instant claim 1 is neither claimed nor obvious in view of the '057 patent. Withdrawal of the double patenting rejection related to the '057 patent is respectfully requested.

The '658 patent is directed to and claims a process for the preparation of N, N'-carbonyldiazoles by reacting azolide salts with phosgene in the presence of an aromatic compound or an ether as solvent. *See the '068 patent, claim 1.* In contrast, instant claim 1 does not feature the reacting of an azolide salt. There is nothing in the '658 patent that would lead one of skill in the art to use an azole such as in instant claim 1 in place of the azolide salt found in the '658 patent. Further, the process of the '068

patent requires the formation of the azolide salt prior to the reaction with phosgene in the solvent mixture. *See the '068 patent, column 3, lines 30; column 4, lines 37-65; and Examples.* This is not a feature of instant claim 1 and one skilled in the art would not find it obvious to replace the azolide salt of the '068 patent with the azole featured in instant claim 1. As such, instant claim 1 is neither claimed nor obvious in view of the '068 patent. Withdrawal of the double patenting rejection related to the '068 patent is respectfully requested.

The '012 patent discloses a process for preparing N, N'-carbonyldiazoles by reacting an azole with phosgene in a specific halogenated aliphatic solvent where the entire amount of azole to be reacted is introduced as an initial charge and then phosgene is metered in. *See the '012 patent, claim 1.* This process differs from instant claim 1 in that instant claim 1 recites metering in the azole and phosgene at a rate of 1 mol of azole to 0.17 to 0.34 mol of phosgene. There is nothing in the '012 patent that discusses metering in the azole and phosgene at any specific rate, specifically, the rate claimed in instant claim 1. The '012 patent specifically states that it is essential that the entire amount of the azole to be reacted is introduced as an initial charge in the halogenated aliphatic hydrocarbon. *See the '012 patent, column 3, lines 38-41.* As such, the '012 specifically teaches away from metering in the azole and phosgene together at a specific rate. As such, the '012 patent neither claims the same features as instant claim 1 nor can a case for obviousness of instant claim 1 be supported by the '012 patent. Withdrawal of the double patenting rejection related to the '012 patent is respectfully requested.

The '045 patent is assigned to BASF AG. It is not understood how this patent resulted in a rejection under double patenting as it is not commonly owned by instant assignee nor is there a common inventorship. Therefore, the '045 patent will be addressed under 103(a) for purposes of responding to the rejection. The '045 patent discloses a process for preparing caronyldiimidazole from imidazole hydrochloride and phosgene in an inert solvent. There is no disclosure in the '045 patent of metering in the azole and phosgene at a rate of 1 mol of azole to 0.17 to 0.34 mol of phosgene. The '045 patent discloses placing the full charge of imidazole in the solvent and over a

course of time passing phosgene in the mixture of solvent and imidazole. Nowhere in the '045 patent would it lead one skilled in the art to meter in the azole and phosgene at any rate, specifically, not the rate as claimed in instant claim 1. As such, one skilled in the art would not find the process of claim 1 obvious in view of the '045 patent. Withdrawal of any rejection based on the '045 patent is respectfully requested.

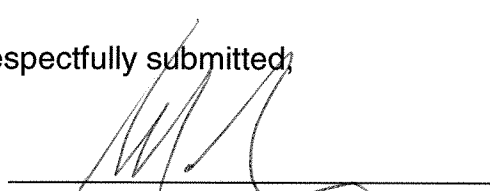
Claims 2-14 either directly or indirectly depend from claim 1 and are patentable over the cited references for at least the same reasons as set forth above with regard to claim 1. Withdrawal of the rejection of these claims is respectfully requested.

In view of the foregoing, the instant application, as amended, is now in condition for allowance. A prompt response to this Amendment in the form of a Notice of Allowability is hereby solicited.

The USPTO is hereby authorized to charge any fees, including any fees for an extension of time or those under 37 CFR 1.16 or 1.17, which may be required by this paper, and/or to credit any overpayments to Deposit Account No. 50-2527.

Respectfully submitted,

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